Identification Of Errors-In-Variables Model With Observation Outliers Based On Minimum-Covariance-Determinant

ALMutawa, J.;Faculty of Mathematical Science Department, King Fahd University of Petroleum and Minerals, KFUPM Box 154, Dhahran 31261, Saudi Arabia, jaafarm@kfupm.edu.sa;

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King Fahd University of Petroleum & Minerals

http://www.kfupm.edu.sa

Summary

In this paper, we develop a subspace system identification algorithm for the errors-in-variables (EIV) model subject to observation noise with outliers. By using the minimum covariance determinant (MCD), we identify and delete the outliers, and then apply the classical EIV subspace system identification algorithms to get state space models. In order to solve the MCD problem for the EIV model we propose a random search algorithm. The proposed algorithm has been applied to a heat exchanger data.